

ABSTRACT

A disclosed flying craft includes a suspension structure having a first end and a second end, a lift unit, and a payload unit. The lift unit includes a nacelle and a tailboom, and pivotally couples to the first end of the suspension structure, and a payload unit couples to the structure's second end. Thus the tailboom can pivotally couple with respect to the payload unit, which advantageously permits the tailboom to assume an orientation desirable for a particular mode of flight. During vertical flight or hover, the tailboom can hang from the lift unit in an orientation that is substantially parallel to the suspension structure and that minimizes resistance to downwash from the lift unit. During horizontal flight, the tailboom can be orthogonal to the suspension structure, extending rearward in an orientation where it can develop pitching and yawing moments to control and stabilize horizontal flight. Advantageous variations and methods are also disclosed.